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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/798,305

03/12/2004

Takahiro Kume

742158-9

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25570 7590 08/15/2007  
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EXAMINER

CHANG, VICTOR S

ART UNIT

PAPER NUMBER

1771

MAIL DATE

DELIVERY MODE

08/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/798,305	<b>Applicant(s)</b> KUME ET AL.	
	<b>Examiner</b> Victor S. Chang	<b>Art Unit</b> 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 and 10-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Introduction***

1. Applicants' amendments and remarks filed on 7/12/2007 have been entered. The abstract, specification, and claim 1 have been amended. Claims 1-3, 9 and 21-23 are active.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In view of the amendments, the objection to specification and 112, 2<sup>nd</sup> paragraph rejection in prior Office action mailed 3/12/2007 have been withdrawn. However, a careful review of the claimed invention, it appears that applicants have mismatched structural elements from various different embodiments, and resulted in a claimed invention which is either new matter, or vague and indefinite in its structural elements.

### ***Claim Rejections - 35 USC § 112***

4. Claims 1-3, 9 and 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

More particularly, a careful review shows that previously raised new matter has not been fully addressed by the amendments. In Office action mailed 11/16/2006, the examiner has pointed out that applicants fail to provide a matching support in the specification for added

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limitation "uniform distribution of foam cells ... in a direction of the thickness". A search throughout the specification, the examiner can only find disclosure that "uniform foam cell structure in a direction of the thickness" for the embodiment disclosed in Examples 1, 4, 5 and 6, as shown in Figs. 5A and 6. Since uniform foam cell structure inherently encompasses uniform cell distribution, the limitation is inherently disclosed by the abovementioned embodiment. However, this embodiment of "uniform cell structure in a direction of the thickness" is clearly incommensurate with the multilayer structure of "surface layer" and "polishing layer" of the claimed invention. While the embodiments shown in Figs. 4A and 4B appears to be in agreement with the recited multilayer structure, the single layer of elongated cells in the direction of thickness is incommensurate with the limitation "uniform distribution of foam cells ... in a direction of the thickness", further, it is also incommensurate with the recitation "an average length of said polishing layer foam cells adjacent to said polishing face is less than half of said polishing layer". Applicants appear to have mismatched structural elements from various different embodiments, and resulted in a claimed invention of new matter.

5. Claims 1-3, 9 and 21-23 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

More particularly, the omitted structural cooperative relationships are the sequence of the surface layer, polishing face and polishing layer. Since polishing layer is recited on side of the surface layer that is allowed to wear away by polishing, it is interpreted as outer surface of the surface layer. However, such as interpretation is incommensurate with the added limitation (see amendment filed 11/16/2006) "an average length of said polishing layer foam cells adjacent to

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said polishing face is less than half of said polishing layer”, because the polishing layer is recited as a separate layer, and it is unclear how the polishing layer can be adjacent to the outer surface of the surface layer? Does it mean that the “surface layer” is a portion of the “polishing layer”?

Furthermore, claim 1 recites that a polishing sheet comprising “an elastic plastic foam sheet”. However, absence a definition in the specification what constitutes an “elastic plastic foam sheet”, the term is vague and indefinite, because “elastic” and “plastic” are mutually exclusive material properties: “elastic material” relates to a material which elastically recovers substantially its original dimension after being stretched, whereas “plastic material” relates to a material which substantially changes its dimension after being stretched. It is unclear what is the claimed scope of material property.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/  
Primary Examiner, Art Unit 1771

8/14/2007